AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (Currently Amended): An optical recording system comprising:

a writing array of modulatable light sources formed on a substrate:

a reading array of modulatable light sources formed on a separate substrate; and

an objective lens positioned relative to said writing array and said reading array of modulatable light sources such that said objective lens is capable of focusing at least one light beam from each of said writing array and said reading array of modulatable light sources on a target medium ~~wherein the writing array and reading array are embedded in a common substrate~~.

Claim 2 (Currently Amended): The optical recording system of claim 1 wherein said writing array of modulatable light sources comprises a first Vertical Cavity Surface Emitting Laser (VCSEL) array ~~of VCSELs~~ and said reading array of modulatable light sources comprises a second VCSEL array ~~of VCSELs~~.

Claim 3 (Currently Amended): The optical recording system of claim 2, further comprising a detector to receive a set of one or more beams~~, the set of one or more beams are~~ emanating ~~ed~~ from the reading array and ~~are~~ reflected from the target medium.

Claim 4 (Previously Presented): The optical recording system of claim 3 wherein each VCSEL of said first VCSEL array is capable of writing a separate track on said target medium.

Claim 5 (Original): The optical recording system of claim 1 wherein said modulatable light sources are spaced at regular intervals.

Claim 6 (Original): The optical recording system of claim 5 wherein said regular intervals comprise center-to-center distances of at least approximately 40 microns.

Claim 7 (Previously Presented): The optical recording system of claim 1 wherein said writing array of modulatable light sources comprises at least one line of modulatable light sources positioned at an angle relative to a direction of movement of said target medium.

Claim 8 (Original): The optical recording system of claim 7 wherein each modulatable light source of said at least one line of modulatable light sources is associated with a separate path on said target medium.

Claim 9 (Previously Presented): The optical recording system of claim 1 further comprising:

a polarizing beam-splitter located between said writing and said reading array of modulatable light sources and said objective lens; and

a circularly polarizing element located adjacent to said polarizing beam-splitter.

Claim 10 (Original): The optical recording system of claim 9 wherein said circularly polarizing element comprises a quarter wave plate.

Claim 11 (Currently Amended): An optical recording system comprising:

a first Vertical Cavity Surface Emitting Laser (VCSEL) array ~~of Vertical Cavity Surface Emitting Lasers (VCSEL)~~;

a second VCSEL array ~~of VCSEL~~;

an objective lens located in an optical path of each of said first and second VCSEL arrays, wherein said objective lens is capable of focusing at least one light beam from each of said first and second VCSEL arrays on a target medium; and

a detector to receive a set of one or more beams, the set of one or more beams having emanated from the second VCSEL array ~~of VCSEL~~ and the set of one or more beams having reflected from the target medium;

wherein the first VCSEL array is located on a first substrate, and the second VCSEL array is located on a second substrate, wherein the first substrate is separate from the second substrate.

Claim 12 (Original): The optical recording system of claim 11 wherein said first VCSEL array comprises a writing array and said second VCSEL array comprises a reading array.

Claim 13 (Original): The optical recording system of claim 12 wherein said first VCSEL array comprises a plurality of individually modulatable light sources and said second VCSEL array comprises a plurality of continuously operable light sources.

Claim 14 (Original): The optical recording system of claim 12 wherein:

said first VCSEL array is capable of emitting a plurality of light beams having a first wavelength;

said second VCSEL array is capable of emitting a plurality of light beams having a second wavelength different from said first wavelength; and

said objective lens is achromatic.

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Claim 15 (Original): The optical recording system of claim 12 wherein each VCSEL of said first VCSEL array is capable of writing a separate track on said target medium.

Claim 16 (Original): The optical recording system of claim 15 wherein said first VCSEL array is positioned at an angle relative to a direction of movement of said target medium.

Claim 17 (Cancelled)

Claim 18 (Cancelled)

Claim 19 (Original): The optical recording system of claim 11 wherein said first and second VCSEL arrays have the same array spacing.

Claim 20 (Original): The optical recording system of claim 12, further comprising:

a first polarizing beam-splitter located between said first VCSEL array and said objective lens;

a second polarizing beam-splitter located between said first polarizing beam-splitter and said objective lens; and

a circularly polarizing plate located adjacent said second polarizing beam-splitter.

Claim 21 (Original): The optical recording system of claim 20 wherein said polarizing beam-splitter comprises a dichroic polarizing beam-splitter.

Claim 22 (Currently Amended): An optical recording system comprising:

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a writing array of Vertical Cavity Surface Emitting Lasers (VCSELs);

a reading array of VCSELs;

a dichroic polarizing beam-splitter positioned to receive a plurality of light beams from each of said writing array of VCSELs ~~array~~ and said reading array of VCSELs ~~array~~;

a polarizing beam-splitter positioned to receive said light beams upon said light beams exiting said dichroic polarizing beam-splitter;

a circularly polarizing plate coupled to an exit face of said polarizing beam-splitter;

an achromatic objective lens positioned to receive said light beams upon said light beams exiting said circularly polarizing plate, wherein said objective lens is capable of focusing said light beams on a target medium;

at least one adjustment device coupled to said objective lens to adjust a position of said objective lens;

a detection system positioned to receive said light beams upon said light beams reflecting from said target medium, said detection system capable of providing data to control said at least one adjustment device.

Claim 23 (Currently Amended) An optical recording system comprising:

a multidimensional writing array of modulatable light sources formed on a first substrate;

a multidimensional reading array of modulatable light sources formed on a second substrate that is separate from the first substrate; and

an objective lens positioned relative to said writing array and said reading array of modulatable light sources such that said objective lens is capable of focusing at least one light beam from each of said writing array and said reading array of modulatable light sources on a target medium.

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Claim 24 (Currently Amended): An optical recording system comprising:

a multidimensional writing array of modulatable light sources formed on a first substrate;

a reading array of modulatable light sources formed on a second substrate that is separate from the first substrate; and

an objective lens positioned to said writing array and said reading array of modulatable light sources such that said objective lens is capable of focusing at least one light beam from each of said writing array and said reading array of modulatable light sources on a target medium;

wherein the writing array and reading arrays are angled on a substrate such that each modulatable light source of the writing array can write a separate track on the target medium.